

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF FOUR EXISTING TRAFFIC CONTROL SIGNALS AT THE INTERSECTIONS OF MD 213 (BRIDGE ST.) AND MD 7 (MAIN ST.), MD 213 (BRIDGE ST.) AND MD 7 (HOWARD ST.), MD 7 (DELAWARE AVE.) AND HOWARD ST. AND MD 7 (MAIN ST.) AND MD 268 (NORTH ST.) IN CECIL COUNTY.

INTERSECTION OPERATION

A. MD 213 (BRIDGE ST.) AND MD 7 (MAIN ST.)

THE INTERSECTION WILL OPERATE IN A NEMA FIVE-PHASE, SEMI-TRAFFIC-ACTUATED MODE WITH THE MD 213 APPROACHES OPERATING CONCURRENTLY AND THE EASTBOUND MD 7 APPROACH OPERATING ALONE.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED ON BOTH APPROACHES OF MD 213.

AN ALTERNATE PEDESTRIAN PHASE EXISTS ACROSS THE NORTH LEG OF MD 213 AND PEDESTRIAN INDICATIONS EXIST ACROSS THE EAST AND WEST LEG OF MD 7.

B. MD 213 (BRIDGE ST.) AND MD 7 (HOWARD ST.)

THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE, SEMI-TRAFFIC-ACTUATED MODE WITH THE MD 213 APPROACHES OPERATING CONCURRENTLY AND THE WESTBOUND MD 7 APPROACH OPERATING ALONE.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING EXISTS FOR SOUTHBOUND MD 213.

C. MD 7 (DELAWARE AVE.) AND HOWARD STREET

THE INTERSECTION WILL OPERATE IN A NEMA THREE-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 7 APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR NORTHBOUND MD 7.

D. MD 7 (MAIN ST.) AND MD 268 (NORTH ST.)

THE INTERSECTION WILL OPERATE IN A NEMA TWO-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE EASTBOUND MD 7 APPROACH OPERATING ALONE AND THE MD 268 APPROACH OPERATING ALONE.

AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS THE WEST LEG OF MD 7.

CONTROLLER REQUIREMENTS

THE EXISTING POLE MOUNTED CABINET AND CONTROLLERS WILL BE USED.

A TWO-CHANNEL, SELF-MOUNT TIME DELAY, OUTPUT, LOOP DETECTOR AMPLIFIER SHALL BE INSTALLED IN THE POLE MOUNTED CABINET AT MD 213 (BRIDGE ST.) AND MD 7 (HOWARD ST.) INTERSECTION.

RESPONSIBILITIES AND SEQUENCE OF WORK ACTIVITIES

Work to be performed prior to July 12, 1999:

WORK ACTIVITIES

- A. Install new loop detectors, signal heads and associated wiring as shown on signal plans (new signal heads shall be covered).
- B. Install new blind coupling in cabinet at MD 213 (Bridge Street) and MD 7 (Howard Street).
- C. Install new signs as shown on signal and signing plans (new signs to be covered). Note: New signs replacing existing signs shall be installed the night of July 12, 1999.

WORK RESPONSIBILITIES

A. Maryland State Highway District 2 Areawide Contractor will:

- Perform all traffic signal related work
- Install all signs except on Howard Street
- Install route marker signs on Howard Street
- B. Town of Elkton forces will:
- Install signs on Howard Street
- Remove handicap signing on Main Street

Work to be performed the night (9:00 PM to 6:00 AM) of July 12, 1999 (Raindate to be following Tuesday (July 13) or Wednesday (July 14) weather permitting):

WORK ACTIVITIES

- A. Complete traffic signal related work including the removal of traffic signal heads and signs as required.
- B. Signal wiring and phasing modifications within control cabinet.
- C. Rotate or relocate signs as shown on signing plans.
- D. Remove all signs as shown on signal and signing plans.
- E. Install remaining new signs as shown on signal and signing plans.
- F. Uncover all new signs.
- G. Remove existing and install new pavement markings as shown on signal and signing plans.

WORK RESPONSIBILITIES

A. Maryland State Highway District 2 Areawide Contractor will:

- Complete all traffic signal related work.
- Remove all pavement markings.
- Install all permanent pavement markings.
- Remove, relocate, or install all remaining signs except on Howard Street.
- Rotate D9-2 and M6-1 signs on Main Street.
- B. Town of Elkton forces will:
- Remove, rotate or install all remaining signs on Howard Street.
- Rotate or remove all parking related signing on Main Street.
- C. District 2 forces will:
- Install Type III barricade on Howard Street.
- Coordinate with bridge contractor to install temporary pavement marking tape on Howard Street.
- D. MSHA Signal Shop will perform all signal wiring and phasing modifications within control cabinet.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9000	1 EACH	TWO-CHANNEL, SELF MOUNT DETECTOR AMPLIFIER
9019	1 EACH	8 IN./12 IN., ONE-WAY, FIVE-SECTON (R,Y,YA,G,GA) TRAFFIC SIGNAL HEAD WITH TETHER CLAMP - MAST ARM MOUNT.
9035	2 EACH	12 IN., ONE WAY, TWO-SECTION PEDESTRIAN SIGNAL HEAD - POLE MOUNT
9054	2 EACH	8 IN./12 IN., ONE-WAY, FIVE-SECTON (R,Y,YA,G,GA) TRAFFIC SIGNAL HEAD WITH TETHER CLAMP - SPAN MOUNT.
9057	3 EACH	8 IN., ONE-WAY, THREE-SECTON (R,Y,G) TRAFFIC SIGNAL HEAD WITH TETHER CLAMP - SPAN MOUNT.
9089	219 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
		- 1 EACH D-3(L) SIGN "MAIN ST" (VARIABLE X 16 IN.) - SPAN MOUNT
		- 1 EACH D-3(L) SIGN "NORTH ST" (VARIABLE X 16 IN.) - SPAN MOUNT
		- 1 EACH D-3(L) SIGN "BRIDGE ST" (VARIABLE X 16 IN.) - POLE MOUNT
		- 1 EACH R3-5L SIGN (30 IN. X 36 IN.) - SPAN MOUNT
		- 1 EACH R3-2 SIGN (30 IN. X 30 IN.) - SPAN MOUNT
		- 2 EACH R10-12 SIGN (36 IN. X 42 IN.) - MAST ARM MOUNT
		- 2 EACH M3-2 SIGN (24 IN. X 12 IN.) - POLE MOUNT
		- 1 EACH R3-6(MOD.) SIGN (30 IN. X 36 IN.) - SPAN MOUNT.
		- 2 EACH R6-1(L) SIGN (36 IN. X 12 IN.) - POLE MOUNT
		- 2 EACH M1-5 SIGN (24 IN. X 24 IN.) - GROUND MOUNT
		- 4 EACH M1-5 SIGN (30 IN. X 24 IN.) - GROUND MOUNT
		- 7 EACH M6-1 SIGN (21 IN. X 15 IN.) - GROUND MOUNT
		- 2 EACH M6-1 SIGN (21 IN. X 15 IN.) WHITE ON BLUE - GROUND MOUNT
		- 1 EACH M6-3 SIGN (21 IN. X 15 IN.) - GROUND MOUNT
		- 2 EACH M6-3 SIGN (21 IN. X 15 IN.) WHITE ON BLUE - GROUND MOUNT
		- 1 EACH M3-3 SIGN (24 IN. X 12 IN.) - GROUND MOUNT
		- 1 EACH M3-1 SIGN (24 IN. X 12 IN.) - GROUND MOUNT
		- 1 EACH M3-4 SIGN (24 IN. X 12 IN.) - GROUND MOUNT
		- 1 EACH R6-1(R) SIGN (36 IN. X 12 IN.) - GROUND MOUNT
		- 2 EACH R6-1(L) SIGN (36 IN. X 12 IN.) - GROUND MOUNT
		- 1 EACH R3-7(L) SIGN (30 IN. X 42 IN.) - GROUND MOUNT
		- 1 EACH W11A-2 SIGN (24 IN. X 24 IN.) - GROUND MOUNT
		- 2 EACH R3-1 SIGN (24 IN. X 24 IN.) - GROUND MOUNT
		- 1 EACH R3-2 SIGN (24 IN. X 24 IN.) - GROUND MOUNT
		- 1 EACH W6-3 SIGN (24 IN. X 24 IN.) - GROUND MOUNT
		- 2 EACH R5-1 SIGN (30 IN. X 30 IN.) - GROUND MOUNT
		- 4 EACH D9-2 SIGN (24 IN. X 24 IN.) - GROUND MOUNT
9096	2 EACH	PEDESTRIAN PUSHBUTTON AND R10-4 SIGN (NOTE: SIGN TO READ "PUSH BUTTON TO CROSS MAIN STREET")

RESPONSIBILITIES AND SEQUENCE OF WORK ACTIVITIES (CONT.)

Work to be performed after Bridge Project is complete (scheduled for December 1999)

WORK ACTIVITIES

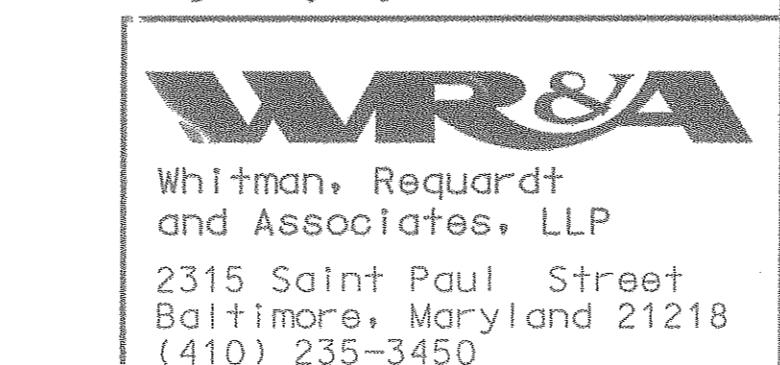
- A. Remove temporary pavement marking tape on Howard Street.
- B. Install 6 inch double yellow thermoplastic pavement markings on Howard Street to provide two westbound lanes.
- C. Extend existing 24 inch white thermoplastic stop line for left turn lane on Howard Street.
- D. Install pavement marking arrows and letters on Howard Street approaching MD 213.
- E. Remove R3-6 (Mod.) sign from span wire and install R3-5L and R3-5R signs at Howard Street/MD 213 intersection.
- F. Connect loop detector wire for westbound Howard Street left turn lane at MD 213.

WORK RESPONSIBILITIES

- A. MSHA Signal Shop shall perform all work activities, excluding the installation and removal of pavement markings.
- B. Maryland State Highway District 2 Areawide Contractor will install and remove all pavement markings on Howard Street.

SPECIAL NOTE

The Maryland State Highway District 2 Areawide Contractor shall contact Mr. Robert Kiel, District 2 Assistant District Engineer - Traffic, at (410) 778-3061 and Mr. Lewis George, Town of Elkton Administrator, at (410) 398-0970 prior to beginning any work.



REVISIONS	APPROVALS
	ASST. TRAFFIC ENGINEERING DESIGN DIVISION
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, TRAFFIC & SAFETY

DRAWN BY: S.BLOSS
CHECKED BY: N.LEARY
SCALE: NONE
DATE: 4-27-99

F.A.P. NO: _____
S.H.A. NO: _____
COUNTY: CECIL
LOG MILE: _____

T.I.M.S. NO: _____
SHEET NO: _____
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EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

CATEGORY CODE NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC PER ASSIGNMENT
5007	900 L.F.	6 IN. WHITE THERMOPLASTIC PAVEMENT MARKING TAPE
5008	700 L.F.	6 IN. YELLOW THERMOPLASTIC PAVEMENT MARKINGS
5009	250 L.F.	12 IN. WHITE THERMOPLASTIC PAVEMENT MARKING TAPE
5010	65 L.F.	24 IN. WHITE THERMOPLASTIC PAVEMENT MARKING TAPE
5011	16 EACH	THERMOPLASTIC PAVEMENT MARKING LETTER
5012	12 EACH	THERMOPLASTIC PAVEMENT MARKING ARROW
5013	600 L.F.	REMOVE EXISTING PAVEMENT MARKING - ANY WIDTH
5014	27 EACH	REMOVE EXISTING PAVEMENT MARKING LETTER OR ARROW
8007	1 EACH	3/4" TO 3" BLIND COUPLING FOR TRAFFIC SIGNAL STRUCTURES - WELDED AND GALVANIZED
8011	8 EACH	INSTALL SIGNAL HEAD (ANY TYPE)
8018	2 EACH	INSTALL PUSHBUTTON AND SIGN
8021	720 L.F.	FURNISH AND INSTALL SAWCUT FOR SIGNAL (LOOP DETECTOR)
8023	50 L.F.	FURNISH AND INSTALL 1 IN. LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8040	2550 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)
8041	500 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8042	150 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G.)
8043	150 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 A.W.G.)
8044	100 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
8045	430 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G.)
8051	90 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 IN. X 4 IN.
8053	131 S.F.	INSTALL GROUND MOUNTED SIGN
8054	88 S.F.	INSTALL OVERHEAD SIGN
8061	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT PER ASSIGNMENT
NEG.	2 EACH	RELOCATE EXISTING SIGNAL HEAD
NEG.	5 EACH	RELOCATE EXISTING GROUND MOUNTED SIGN
NEG.	105 L.F.	CHANNEL IRON POST
NEG.	2 EACH	ROTATE EXISTING GROUND MOUNTED SIGN

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT.

STANDARD NO. MD-104.00 - 104.00-30

STANDARD NO. MD-104.35-01 (LANE SHIFT)

STANDARD NO. MD-104.31-02 (FLAGGING OPERATION)

STANDARD NO. MD-104.33-01 (SHOULDER WORK)

STANDARD NO. MD-104.49-01 (SHOULDER WORK)

STANDARD NO. MD-104.32-01 (INTERSECTION FLAGGING OPERATION)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. RICHARD LINDSAY
DISTRICT #2 ENGINEER
PHONE: (410) 778-3061

MR. DENNIS NORTH
DISTRICT #2 UTILITIES ENGINEER
PHONE: (410) 778-3061

MR. ROBERT KIEL
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 778-3061

MR. RICHARD L. DAFF, SR.<